

TO: Mr. F. E. Resnik
FROM: F. A. Lowman
SUBJECT: TPM Precursors, Marlboro 85 mm

April 13, 1967

The present manufacturing level of Marlboro flavor does not add significantly to the TPM. Humectants do contribute to TPM.

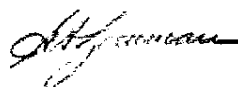
Two samples of Marlboro 85 mm cigarettes were manufactured on a Mark VI maker to the following specifications:

1. present production amounts of humectants and flavors
Code X6D7CU
2. with all humectants but without flavors - Code X6D7CV

Filler rod TPM and TPM values were higher for cigarettes without flavors (CV) than for those with flavors (CU). See table. Since these two samples were selected at the same weight, the sample without flavors actually contained more filler. It was assumed that flavors contributed 10% of the total filler weight, and a sample without flavors was selected 10% lighter in weight (CV-1) than the sample with flavors (CU). There was no significant difference in TPM between cigarettes with flavors and cigarettes 10% lighter without flavors.

FAL:rab

cc: H. Wakeham
R. B. Seligman (1)
R. N. Thomson
F. L. Daylor
L. L. Long
J. E. Wickham ✓
Sample Room



PM3000985489

Marlboro 85 mm

Approx. 10%
Lighter
Rod Weight

		<u>Same Rod Weight</u>		
		<u>Control With Flavors and Humectants</u>	<u>Without Flavors But With Humectants</u>	<u>Without Flavors But With Humectants</u>
	<u>Replicates</u>	<u>X6D7CU</u>	<u>X6D7CV</u>	<u>X6D7CV-1</u>
IBM Code				
Filler rod TPM, mg/cigt	16	37.0	38.5	36.9
Filler rod nicotine, mg/cigt	8	1.73	1.90	1.80
Puffs/cigt	64	8.0	8.3	7.0
TPM, mg/cigt	16	21.8	23.5	---
Nicotine, mg/cigt	8	1.30	1.44	---
Puffs/cigt	64	8.9	9.0	---
Total RTD, in. of H ₂ O	50	3.92	3.94	3.47**
Plug RTD, in. of H ₂ O	50	2.20	2.20	2.25**
Circumference, mm	30	25.3	25.3	25.2**
Porosity, sec		21	21	21
Density, gms/cc		0.25	0.25	0.22
Static Burn. Time, min.	25	8.2	8.3	---
Reduc. Sugars in filler, %		5.9	4.9	---
Humectants in filler, %				
Propylene Glycol		0.97	0.99	
TEG		0.42	0.42	
Glycerine		2.4	2.2	
Humectants in smoke, mg/cigt				
Propylene Glycol		0.66	0.74	
*TEG		0.32	0.33	
Glycerine		1.5	1.5	

*This is not a standard analysis. The precision and accuracy have not been determined.

**20 replicates

PM3000985490